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|--|--|---|
| <b>TRANSMITTAL LETTER TO THE UNITED STATES<br/>DESIGNATED/ELECTED OFFICE (DO/EO/US)<br/>CONCERNING A SUBMISSION UNDER 35 U.S.C. 371</b>  |  | ATTORNEY'S DOCKET NUMBER<br><b>20020029-US</b>                      |
| INTERNATIONAL APPLICATION NO.<br><b>PCT/US2003/017377</b>  |  | U.S. APPLICATION NO. (if known, see 37 CFR 1.5)<br><b>10/529019</b> |
| INTERNATIONAL FILING DATE<br><b>02 JUNE 2003 (02.06.2003)</b>  |  | PRIORITY DATE CLAIMED<br><b>19 NOV 2002 (19.11.2002)</b>            |
| TITLE OF INVENTION<br><b>BANDWIDTH-EFFICIENT WIRELESS NETWORK MODEM</b>  |  |   |
| APPLICANT(S) FOR DO/EO/US<br><b>BROMMER, Karl D.</b>   |  |   |
| Applicant herewith submits to the United States Designated/Elected Office (DO/EO/US) the following items and other information:  |  |   |
| <ol style="list-style-type: none"> <li>1. <input checked="" type="checkbox"/> This is a <b>FIRST</b> submission of items concerning a submission under 35 U.S.C. 371.</li> <li>2. <input type="checkbox"/> This is a <b>SECOND</b> or <b>SUBSEQUENT</b> submission of items concerning a submission under 35 U.S.C. 371.</li> <li>3. <input checked="" type="checkbox"/> This is an express request to begin national examination procedures (35 U.S.C. 371(f)). The submission must include items (5), (6), (9) and (21) indicated below.</li> <li>4. <input checked="" type="checkbox"/> The US has been elected (Article 31).</li> <li>5. <input checked="" type="checkbox"/> A copy of the International Application as filed (35 U.S.C. 371(c)(2))               <ol style="list-style-type: none"> <li>a. <input type="checkbox"/> is attached hereto (required only if not communicated by the International Bureau).</li> <li>b. <input checked="" type="checkbox"/> has been communicated by the International Bureau.</li> <li>c. <input type="checkbox"/> is not required, as the application was filed in the United States Receiving Office (RO/US).</li> </ol> </li> <li>6. <input type="checkbox"/> An English language translation of the International Application as filed (35 U.S.C. 371(c)(2)).               <ol style="list-style-type: none"> <li>a. <input type="checkbox"/> is attached hereto.</li> <li>b. <input type="checkbox"/> has been previously submitted under 35 U.S.C. 154(d)(4).</li> </ol> </li> <li>7. <input checked="" type="checkbox"/> Amendments to the claims of the International Application under PCT Article 19 (35 U.S.C. 371(c)(3))               <ol style="list-style-type: none"> <li>a. <input type="checkbox"/> are attached hereto (required only if not communicated by the International Bureau).</li> <li>b. <input type="checkbox"/> have been communicated by the International Bureau.</li> <li>c. <input type="checkbox"/> have not been made; however, the time limit for making such amendments has NOT expired.</li> <li>d. <input checked="" type="checkbox"/> have not been made and will not be made.</li> </ol> </li> <li>8. <input type="checkbox"/> An English language translation of the amendments to the claims under PCT Article 19 (35 U.S.C. 371(c)(3)).</li> <li>9. <input checked="" type="checkbox"/> An oath or declaration of the inventor(s) (35 U.S.C. 371(c)(4)).</li> <li>10. <input type="checkbox"/> An English language translation of the annexes of the International Preliminary Examination Report under PCT Article 36 (35 U.S.C. 371(c)(5)).</li> </ol> |  |   |
| Items 11 to 20 below concern document(s) or information included:  |  |   |
| <ol style="list-style-type: none"> <li>11. <input type="checkbox"/> An Information Disclosure Statement under 37 CFR 1.97 and 1.98.</li> <li>12. <input type="checkbox"/> An assignment document for recording. A separate cover sheet in compliance with 37 CFR 3.28 and 3.31 is included.</li> <li>13. <input type="checkbox"/> A preliminary amendment.</li> <li>14. <input checked="" type="checkbox"/> An Application Data Sheet under 37 CFR 1.76.</li> <li>15. <input type="checkbox"/> A substitute specification.</li> <li>16. <input type="checkbox"/> A power of attorney and/or change of address letter.</li> <li>17. <input type="checkbox"/> A computer-readable form of the sequence listing in accordance with PCT Rule 13ter.2 and 37 CFR 1.821- 1.825.</li> <li>18. <input type="checkbox"/> A second copy of the published International Application under 35 U.S.C. 154(d)(4).</li> <li>19. <input type="checkbox"/> A second copy of the English language translation of the international application under 35 U.S.C. 154(d)(4).</li> <li>20. <input type="checkbox"/> Other items or information:</li> </ol>   |  |   |

This collection of information is required by 37 CFR 1.414 and 1.491-1.492. The information is required to obtain or retain a benefit by the public, which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 15 minutes to complete, including gathering information, preparing, and submitting the completed form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Mail Stop PCT, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

|   |              |   |         |   |              |
|---|--------------|---|---------|---|--------------|
| U.S. APPLICATION NO. (if known, see 37 CFR 1.5)<br><b>10/529019</b>   |              | INTERNATIONAL APPLICATION NO.<br>PCT/US2003/017377                            |         | ATTORNEY'S DOCKET NUMBER<br>20020029-US |              |
| The following fees have been submitted  |              |   |         | CALCULATIONS                            | PTO USE ONLY |
| 21. <input checked="" type="checkbox"/> Basic national fee..... \$300   |              |   |         | \$ 300.00                               |              |
| 22. <input checked="" type="checkbox"/> Examination fee<br>If International preliminary examination report prepared by USPTO and all claims satisfy provisions of PCT Article 33(1)-(4)..... \$100<br>All other situations..... \$200   |              |   |         | \$ 200.00                               |              |
| 23. <input checked="" type="checkbox"/> Search fee<br>Search fee (37 CFR 1.445(a)(2)) has been paid on the international application to the USPTO as an International Searching Authority..... \$100<br>International Search Report prepared and provided to the Office..... \$400<br>All other situations..... \$500   |              |   |         | \$ 100.00                               |              |
| <b>TOTAL OF 21, 22 and 23 =</b>   |              |   |         | \$ 600.00                               |              |
| <input type="checkbox"/> Additional fee for specification and drawings filed in paper over 100 sheets (excluding sequence listing or computer program listing filed in an electronic medium).<br>The fee is \$250 for each additional 50 sheets of paper or fraction thereof.   |              |   |         |   |              |
| Total Sheets  | Extra Sheets | Number of each additional 50 or fraction thereof (round up to a whole number) | RATE    |   |              |
| - 100 =   | /50 =        |   | x \$250 | \$ 0.00                                 |              |
| Surcharge of \$130.00 for furnishing the oath or declaration later than 30 months from the earliest claimed priority date (37 CFR 1.492(h)).  |              |   |         | \$ 0.00                                 |              |
| CLAIMS  | NUMBER FILED | NUMBER EXTRA  | RATE    | \$                                      |              |
| Total claims  | 24 - 20 =    | 4   | x \$ 50 | \$ 200.00                               |              |
| Independent claims  | 4 - 3 =      | 1   | x \$200 | \$ 200.00                               |              |
| MULTIPLE DEPENDENT CLAIM(S) (if applicable)   |              |   | + \$360 | \$ 0.00                                 |              |
| <b>TOTAL OF ABOVE CALCULATIONS =</b>  |              |   |         | \$ 1000.00                              |              |
| <input type="checkbox"/> Applicant claims small entity status. See 37 CFR 1.27. Fees above are reduced by 1/2.  |              |   |         | 0.00                                    |              |
| <b>SUBTOTAL =</b>   |              |   |         | \$ 1000.00                              |              |
| Processing fee of \$130.00 for furnishing the English translation later than 30 months from the earliest claimed priority date (37 CFR 1.492(i)).   |              |   |         | \$ 0.00                                 |              |
| <b>TOTAL NATIONAL FEE =</b>   |              |   |         | \$ 1000.00                              |              |
| Fee for recording the enclosed assignment (37 CFR 1.21(h)). The assignment must be accompanied by an appropriate cover sheet (37 CFR 3.28, 3.31). \$40.00 per property  |              |   |         | \$ 0.00                                 |              |
| <b>TOTAL FEES ENCLOSED =</b>  |              |   |         | \$ 1000.00                              |              |
|   |              |   |         | Amount to be refunded:                  | \$           |
|   |              |   |         | Amount to be charged:                   | \$           |
| <p>a. <input type="checkbox"/> A check in the amount of \$ _____ to cover the above fees is enclosed.</p> <p>b. <input checked="" type="checkbox"/> Please charge my Deposit Account No. <u>190130</u> in the amount of \$ <u>1000.00</u> to cover the above fees.<br/>A duplicate copy of this sheet is enclosed.</p> <p>c. <input checked="" type="checkbox"/> The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment to Deposit Account No. <u>190130</u>. A duplicate copy of this sheet is enclosed.</p> <p>d. <input type="checkbox"/> Fees are to be charged to a credit card. <b>WARNING:</b> Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.</p> |              |   |         |   |              |
| <p><b>NOTE:</b> Where an appropriate time limit under 37 CFR 1.495 has not been met, a petition to revive (37 CFR 1.137(a) or (b)) must be filed and granted to restore the International Application to pending status.</p>  |              |   |         |   |              |
| <p>SEND ALL CORRESPONDENCE TO:</p> <p>CUSTOMER NO. 42716<br/>Maine &amp; Asmus<br/>PO BOX 3445<br/>Nashua, NH 03061-3445</p>  |              |   |         |   |              |
|   |              |   |         | SIGNATURE                               |              |
|   |              |   |         | Scott J. Asmus                          |              |
|   |              |   |         | NAME                                    |              |
|   |              |   |         | 42,269                                  |              |
|   |              |   |         | REGISTRATION NUMBER                     |              |

10/529019

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: BROMMER, Karl D.

Group Art Unit:

Serial No.

Examiner:

Filed: Herein

Atty. Dkt. No: 20020029-US

For: BANDWIDTH-EFFICIENT WIRELESS NETWORK MODEM

To: Mail Stop PCT  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Fm:

42716

PATENT TRADEMARK OFFICE

CERTIFICATE OF MAILING 37 CFR 1.10: I certify that this correspondence is being deposited on the below date with the U.S. Postal Service with sufficient postage as EXPRESS MAIL POST OFFICE TO ADDRESSEE addressed to: Mail Stop PCT, Commissioner for Patents, PO Box 1450 Alexandria, VA 22313-1450.

Date: march 24, 2005

*Debra A. Stengel*  
☒ Debra A. Stengel or ☐ Andrew P. Cernota, Reg. No. 52,711

Dear Honorable Commissioner:

TRANSMITTAL COVER SHEET

Submitted herewith, pursuant to 35 U.S.C. 371, is a US National Stage Patent Application of International Application No. PCT/US2003/017377 consisting of:

2 pages Transmittal Letter To The United States Designated/Elected Office Concerning a Submission Under 35 U.S.C. 371,

1 page Fee Transmittal Form SB/17,

3 pages Application Data Sheet, and

1 page Declaration and Power of Attorney

DEPOSIT ACCOUNT **190130** AUTHORIZATION – The Office is hereby authorized to charge the required fee, and any deficiency or credit any overpayment in the fees to the above deposit account, owned by BAE SYSTEMS Information and Electronic Systems Integration Inc. an authorized signator for which is Kevin M. Perkins, V.P. & Company Counsel, and for whom the undersigned are authorized agents.

Respectfully submitted,



Scott J. Asmus, Reg. No. 42,269  
Andrew P. Cernota, Reg. No. 52,711  
Attorneys/Agents for Applicant

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JC17 Rec'd PCT/PTO 24 MAR 2005

PTO/SB/17 (12-04)

For use through 07/31/2006. OMB 0651-0032

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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Effective on 12/08/2004:  
Fees pursuant to the Consolidated Appropriations Act, 2005 (H.R. 4818).

# FEE TRANSMITTAL

## For FY 2005

Complete if Known

Application Number **10/529019**  
Filing Date **March 24, 2005**  
First Named Inventor **BROMMER, Karl D.**  
Examiner Name  
Art Unit  
Attorney Docket No. **20020029-US**

☐ Applicant claims small entity status. See 37 CFR 1.27

TOTAL AMOUNT OF PAYMENT (\$)**1000.00**

### METHOD OF PAYMENT (check all that apply)

☐ Check ☐ Credit Card ☐ Money Order ☐ None ☐ Other (please identify):

☒ Deposit Account Deposit Account Number: **190130** Deposit Account Name: **BAE Systems**

For the above-identified deposit account, the Director is hereby authorized to: (check all that apply)

☒ Charge fee(s) indicated below ☐ Charge fee(s) indicated below, except for the filing fee

☒ Charge any additional fee(s) or underpayments of fee(s) under 37 CFR 1.16 and 1.17 ☒ Credit any overpayments

WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.

### FEE CALCULATION

#### 1. BASIC FILING, SEARCH, AND EXAMINATION FEES

| Application Type | FILING FEES |                       | SEARCH FEES |                       | EXAMINATION FEES |                       | Fees Paid (\$) |
|------------------|-------------|-----------------------|-------------|-----------------------|------------------|-----------------------|----------------|
|                  | Fee (\$)    | Small Entity Fee (\$) | Fee (\$)    | Small Entity Fee (\$) | Fee (\$)         | Small Entity Fee (\$) |                |
| Utility          | 300         | 150                   | 500         | 250                   | 200              | 100                   |                |
| Design           | 200         | 100                   | 100         | 50                    | 130              | 65                    |                |
| Plant            | 200         | 100                   | 300         | 150                   | 160              | 80                    |                |
| Reissue          | 300         | 150                   | 500         | 250                   | 600              | 300                   |                |
| Provisional      | 200         | 100                   | 0           | 0                     | 0                | 0                     |                |

#### 2. EXCESS CLAIM FEES

| Fee Description   | Fee (\$) | Small Entity Fee (\$) |
|---|----------|-----------------------|
| Each claim over 20 or, for Reissues, each claim over 20 and more than in the original patent            | 50       | 25                    |
| Each independent claim over 3 or, for Reissues, each independent claim more than in the original patent | 200      | 100                   |
| Multiple dependent claims   | 360      | 180                   |

Total Claims 24 - 20 or HP = 4 Extra Claims x 50 Fee (\$)  
Fee Paid (\$)200

HP = highest number of total claims paid for, if greater than 20

Indep. Claims 4 - 3 or HP = 1 Extra Claims x 200 Fee (\$)  
Fee Paid (\$)200

HP = highest number of independent claims paid for, if greater than 3

Multiple Dependent Claims  
Fee (\$)  
Fee Paid (\$)

#### 3. APPLICATION SIZE FEE

If the specification and drawings exceed 100 sheets of paper, the application size fee due is \$250 (\$125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).

Total Sheets          Extra Sheets          Number of each additional 50 or fraction thereof          Fee (\$)  
- 100 =          / 50 =          (round up to a whole number) x          =          Fee Paid (\$)

#### 4. OTHER FEE(S)

Non-English Specification, \$130 fee (no small entity discount)

Other: Basic filing fee, search fee & examination fee for submission under 35 U.S.C. 371 600.00

#### SUBMITTED BY

Signature Scott J. Asmus Registration No. 42,269 Telephone 603-886-6100  
Name (Print/Type) Scott J. Asmus Date March 24, 2005

This collection of information is required by 37 CFR 1.136. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 30 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.